This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(Original)** An optical device comprising: a plurality of needles having channels; a plurality of fibers inserted in the plurality of needles; and a plurality of optical components aligned and connected with the plurality of fibers.

2. **(Original)** The optical device of claim 1 wherein the needles are microneedles.

3. **(Original)** The optical device of claim 1 wherein the optical components are vertical cavity surface emitting lasers.

4. **(Original)** The optical device of claim 1 wherein the optical components are photodetectors.

5. **(Original)** The optical device of claim 1 further comprising a plurality of photodetectors.

6. **(Original)** The optical device of claim 1 further comprising a sensing element.

7. **(Original)** A method for forming an optical device including a vertical cavity surface emitting laser (VCSEL) array and a fiber array, the method comprising: aligning the fiber array and VCSEL array; joining the fiber array and VCSEL array; reflowing solder on the VCSEL array; and applying underfill between the fiber array and VCSEL array.

8. **(New)** The optical device of claim 1, wherein said channels and/or said needles are tapered.

9. **(New)** The optical device of claim 8, wherein the narrowed end of said tapered channel is narrower than the diameter of said fibers.

10. **(New)** The optical device of claim 1, wherein said needles are fabricated using photolithography and/or laser drilling.

11. **(New)** The optical device of claim 1, wherein said needles have needle bore and needle placement accurate to about 1 micron.

12. **(New)** The optical device of claim 1, wherein said fibers are fixed inside said needles.

13. **(New)** The optical device of claim 12, wherein said fibers are fixed inside said needles with epoxy.

14. (New) The optical device of claim 8, wherein each of said needles has dimensions of about 125 micron exit hole at the narrower end, about 125 micron length, about 175-200 micron extrance hole at the wider end, and about 250 micron between centers.

15. (New) The optical device of claim 1, wherein said needles are made of metal.

16. (New) The optical device of claim 1, further comprising a layer of transparent underfill between said plurality of needles with said plurality of fibers inserted therein, and said plurality of optical components.

17. (New) The optical device of claim 8, wherein the void in said channels with said fibers inserted therein is filled with cured epoxy.

18. (New) The optical device of claim 17, wherein a cured epoxy plug separates the narrower end of said needle or channel and the end of said fiber.

19. (New) The optical device of claim 17, further comprising a cured epoxy lens outside the tip of said needle.

20. (New) The optical device of claim 19, wherein said cured epoxy lens is spherical in shape.

21. (New) The optical device of claim 6, wherein said sensing element comprises a matrix doped with calorimetric and/or fluorescent materials that are sensitive to environmental conditions.

22. (New) The optical device of claim 6, wherein said sensing element is suitable for blood gas sensing, biological oxygen demand, or food safety.

23. (New) The optical device of claim 6, wherein said sensing element is within or outside the tips of said needles.

24. (New) The optical device of claim 21, wherein said calorimetric materials comprise environmentally sensitive dyes selected from rhodamines, bodipy dyes, ruthenium-based dyes, earth dyes, or metal intercalating dyes.

25. (New) The optical device of claim 21, wherein said matrix is selected from: sol gels, hydrogels, polymers with a high gas or liquid permeability, or a hydrophobic matrix.